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## PATENT ABSTRACTS OF JAPAN

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### **(54) HOLLOW-FIBER MEMBRANE MODULE**

(57) Abstract:

**PROBLEM TO BE SOLVED:** To suppress the deformation of a layered air vent during filtration in a hollow-fiber membrane module formed by packing many hollow-fiber membranes with a sheet-shaped air vent means wound on them in a cylindrical case by providing a holding means to position the air vent means close to the inner periphery of the case.

**SOLUTION:** A hollow-fiber membrane module 1 is formed by packing the fiber bundle 3 of a hollow-fiber membrane 3a in a cylindrical case 2, and a potting part 4 is provided to seal a gap between the end 3b of the bundle 3 and the inner periphery of one end 2a of the case 2. Meanwhile, a layered air vent 5 is previously wound on the periphery of the bundle 3, then many communicating holes 10 are formed by the potting, hence the air staying

inside is discharged along with the membrane-permeated fluid, and a decrease in the membrane permeability is prevented. Further, a cap member 6 obtained by providing plural projecting members 6c to the periphery of a bottom plate 6a is inserted into an opening on the opposite side of the potting part 4 as a holding part to be positioned between the bundle 3 and the inner periphery of the case 2.

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